

was especially wet and also coincided with a broad survey of the vegetation of the Phoenix area by the Central Arizona-Phoenix Long Term Ecological Research project at Arizona State University, making finding this plant more likely. In any case, as far as we know there are no prior collections in Arizona, but we expect *O. piluliferum* to become a widespread invasive species within a few years. We have observed additional populations along roads and in particular in natural desert conditions. The introduction of this species serves as an example of the potential impact of non-native ornamental plants, even attractive species, on native vegetation.

Prof A.E. van Wyk of the University of Pretoria in South Africa, was asked if he had any information about this species and he replied: "The widely used Afrikaans name "stinknet" means "stink only", because the plant is useless as a stock feed—it only stinks. Another commonly used local name, and perhaps the oldest in Afrikaans, is "stinkkruid", meaning "stink herb". In former times the plant was widely used medicinally in the Cape and it may have some virtues in this field. This is a strange species. Locally it has been reported from a very wide range of habitats and soil types, though usually in open, sunny locations. It behaves in a manner that makes one wonder whether it is really native to many parts of its current range in southern Africa. All over its range the species shows weedy tendencies by invading especially disturbed areas and cultivated fields. Being an annual, it is clearly a pioneer of disturbed sites. I suspect it is originally a species from the Cape Floristic Region, but due to agriculture has expanded locally beyond its original range. To confirm this one would have to trace the earliest known collections and check their localities. I can, however, confirm that it is not native to provinces such as North-West, Gauteng and Mpumalanga. Specimens from these areas are mainly from cultivated fields, especially fields that are under irrigation in winter. In such fields, the species can form dense, almost monospecific stands, whereas it is completely absent from adjacent natural vegetation. Hence in South Africa it clearly is a weed at times, a tendency which signals danger should the species spread far afield, as seems to be the case in the Phoenix area."

—L. R. LANDRUM, L. DUGAN, S. WHITCOMB, Arizona State University Herbarium, P.O. 874501, Tempe, AZ 85287. J. ANDERSON, BLM, Phoenix, AZ 85027. D. DAMREL, Desert Botanical Garden, Phoenix, AZ 85008. F. E. Northam, 216 E. Taylor St., Tempe, AZ 85281.

CALIFORNIA

DIGITARIA CALIFORNICA (Benth.) Henr. (POACEAE). San Diego County, 1 October 2003. Uncommon on rocky schist hillside at 33°03'N, 116°38'W, 290 m elevation, in Little Blair Valley, Anza-Borrego Desert State Park. Kim L. Marsden 154136 (SD), 1192 (BSCA). [Det. by Larry Hendrickson, 2 October 2003].

Previous knowledge. Arizona cottontop is native to northern and central Mexico, Baja California, Mexico, and Colorado, Arizona, New Mexico and Texas in the southwestern U.S.. [Flora of North America 25 (part 2): 358–383; Hitchcock, A.S. (rev. A. Chase). 1971. Manual of the grasses of the U.S.. Dover Publications, Inc. New York.]

Significance. First report and collection for California. This collection extends the western range of this species from Baja California, Mexico, near 31°46'N, 116°01'W

[R. Moran, SD 63461] about 154 kilometers northward into southern California. The specific epithet *californica* refers to Baja California; the type collection is from Bahia Magdalena, Baja California, Mexico.

—KIM L. MARSDEN AND LARRY E. HENDRICKSON, California State Parks, Colorado Desert District, 200 Palm Canyon Drive, Borrego Springs, CA 92004.

DROSERA × *HYBRIDA* MACF. (DROSERACEAE)—Plumas county, California, 40°00.727'N, 120°59.586'W, elevation 1160 m, 1 September 2004. Plants were found flowering in a wet seep among *Drosera rotundifolia* L. at the Butterfly Valley Botanical Area near Quincy.

Previous knowledge. This taxon, a hybrid between the two eastern North American species *Drosera filiformis* Raf. and *Drosera intermedia* Hayne, is known only from a few locations in New Jersey (D.E. Schnell, 2002, Carnivorous Plants of the United States and Canada, Timber Press, Oregon, p 286); however, other populations of the hybrid may exist undetected in the eastern USA since the two parent species occur together in a number of other states (CT, MD, MA, NC, NY, RI for *Drosera filiformis* var. *filiformis*; AL, FL, GA, MS for *Drosera filiformis* var. *tracyi* (Macf. ex Diels) Diels). The colony of plants in Butterfly Valley, CA, was apparently introduced by carnivorous plant enthusiasts (in years past, other non-native carnivorous taxa have been found at this and other California sites).

Significance. This population of plants was detected by the author in September 2004. At that time, approximately 40–60 rosettes occupied an area only 20 × 40 cm in size. Although in flower, the inflorescences did not appear to be producing viable seed. (*Drosera* × *hybrida* is sterile.) Misidentifications of this cluster of plants are responsible for previous listings of *Drosera anglica* Huds. in Butterfly Valley, for example Forest Service records list the discovery of this cluster of plants, as "*Drosera anglica*," by botanists in 18–19 September, 1992 (Jim Belsher-Howe, Plumas Forest Service, private communication). While *Drosera anglica* can be found in several sites within 50 km of this location, no genuine populations have been found in the Butterfly Valley Botanical Area. The two taxa can easily be separated by the shape of the glandular leaf blade; the leaf blade of *Drosera anglica* is approximately (2.5)3–7(10) times longer than wide, while the leaf blade of *Drosera* × *hybrida* is approximately 45–65 times longer than wide.

Drosera × *hybrida* reproduces by vegetative means only, primarily by the annual production of a few lateral hibernacula each fall. As such, this plant has very little chance of being a significant conservation threat to the Butterfly Valley Botanical Area. However, if horticulturists continue to use the area as a dumping ground for non-native carnivorous plants, an intractable greenhouse weed such as *Utricularia subulata* will eventually be introduced (perhaps unintentionally), as has already occurred in the Mendocino County pygmy forests.

Permission to collect specimens of these plants was kindly granted by staff of the Plumas National Forest Service. Live specimens have been placed in the University of California, Davis, Conservatory, for further study; an herbarium specimen has been stored at the University of California, Davis (DAV), #BR040901.

—BARRY A. RICE, International Carnivorous Plant Society, P.O. Box 72741, Davis, CA 95617.

UTRICULARIA OCHROLEUCA HARTM. (LENTIBULARIACEAE)—El Dorado county, California, 38°47.719'N, 119°58.012'W, elevation 2350 m, 7 August 2004. Grass Lake, near Luther's Pass. Plants were found in sterile condition in a few cm of water on the floating vegetation mat.

Previous knowledge. Circumboreal, found in northern, central, and western Europe, Afghanistan, Japan, and North America. In North America, found in several Canadian provinces, south to the USA (Washington, Oregon, California, Colorado, Ohio, Illinois, Michigan, MN). It was first detected in California in 1994 at Lake Almanor in Plumas County (J.H. Rondeau, Madroño, 1998, 45: 184–185). In 1998 I detected it at a new site (Willow Lake, less than 15 km to the northwest). However, its first known herbarium collection in California (CHSC 54403) was actually in 1991 from yet another nearby site (Little Willow Lake) but this collection was misclassified as *U. intermedia* Hayne; in 2004 I examined this specimen and correctly identified it as *U. ochroleuca*. The new collection, at Grass Lake in El Dorado County, is approximately 210 km to the southeast of the three Plumas County locations.

Significance. This new location at Grass Lake represents a significant range extension south in California. Often confused with the more common *Utricularia intermedia* Hayne, *Utricularia ochroleuca* can be distinguished using gross vegetative characters (P. Taylor, *The Genus Utricularia: a Taxonomic Monograph*, 1989, Kew Bulletin Additional Series XIV). Goran Thor (*Nord. J. Bot.*, 1988, 8(3): 213–225.) emphasizes the use of bladder quadrifid glands to identify boreal *Utricularia* species, and uses quadrifid gland criteria to divide *Utricularia ochroleuca* sensu lato into a more narrowly defined *Utricularia ochroleuca* sensu stricto and *Utricularia stygia* Thor. Using his criteria, previous collections of *Utricularia ochroleuca* in Willow Lake and Little Willow Lake would be more properly interpreted as *Utricularia stygia*. If this interpretation is correct, the Willow Lake and Little Willow Lake plants would be the only stations for *Utricularia stygia* in the lower 48 states of the USA (E. Schlosser, *Carnivorous Plant Newsletter*, 2003, 32: 113–121). It is unclear if the Lake Almanor plants are more closely allied with *U. stygia* or *U. ochroleuca* s. str. In contrast, quadrifid gland arms in the plants from Grass Lake indicate these plants are *Utricularia ochroleuca* s. str. Previous records of *U. stygia* in North America are restricted to Canada (Nova Scotia, and Northwest Territories) and Alaska (Thor 1988).

The population of plants found at Grass Lake was small, so a relatively depauperate collection was obtained for the Herbarium (DAV) at the University of California, Davis, #BR040801.

The three species (*U. intermedia*, *U. stygia*, and *U. ochroleuca* s. str.) can be distinguished using the following vegetative features. Quadrifid gland observations must be made at 200× or higher magnification. Floral characters are not noted below since the latter two species rarely flower in California. The interested reader is encouraged to pursue further details in the works by Taylor, Thor, and Schlosser cited above.

Utricularia intermedia: Stolon shoots markedly dimorphic (the green surface shoots bear only finely dissected leaves, the descending shoots bear bladders only); ultimate leaf segments bear 5–12 setulose bristles on leaf margins; the four arms of the bladder quadrifid glands are in oppositely directed pairs of parallel arms (i.e., diverging by 0–30 degrees); leaf tips acute to obtuse.

Utricularia ochroleuca s. lat.: Stolon shoots weakly di-

morphic (all shoots bear both dissected leaves and bladders, but the relative proportions of leaves vs. bladders subject to variation); ultimate leaf segments bear 2–7 setulose bristles on pronounced marginal teeth; the four arms of the bladder quadrifid glands are in two oppositely directed pairs, where each pair of arms diverge by more than 30 degrees; leaf tips acute. In *Utricularia ochroleuca* s. str., the pair of long gland arms diverge by 30–45 degrees; the pair of short arms diverge by 90–160 degrees. In *Utricularia stygia*, the pair of long gland arms diverge by 20–45 degrees; the pair of short arms diverge by 40–80 degrees.

—BARRY A. RICE, International Carnivorous Plant Society, P.O. Box 72741, Davis, CA 95617.

SALVINIA MOLESTA D. S. Mitch. (SALVINIACEAE).—Orange Co., City of Anaheim, flood plain N of Santa Ana River, Anaheim Wetlands Reserve, ca. 0.5 km E of Wier Canyon Rd., uncommon but widespread in a large constructed pond overgrown with *Eichhornia crassipes* (Mart.) Solms., UTM 11S 430914E 3748784N (NAD 83) [33°52'38"N 117°44'49"W], elev. 102 m (334'), 25 Sep 2004, Riefner 04-441 (RSA).

Previous knowledge. *Salvinia molesta* (giant salvinia, Kariba weed) is an invasive, free-floating aquatic fern native to South America (Brazil), which has become a troublesome pest in Africa, Australia, Hawaii, India, Mauritius, New Guinea, Sri Lanka, New Zealand, and elsewhere (Holm et al. 1977, *The World's worst weeds: Distribution and biology*, University Press of Hawaii, Honolulu; Meyer 2000, in: Sherley [tech. ed.], *Invasive species in the Pacific*, South Pacific Regional Environment Programme, Samoa). In the U.S., *S. molesta* was first observed outside of cultivation in South Carolina (Johnson 1995, *Aquatics* 17:22). It has now also been reported in Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, Texas, and as far west as Arizona and California (Jacono et al. 2001, *Castanea* 66:214–226; DiTomaso and Healy 2003, *Aquatic and Riparian Weeds of the West*, University of California Agriculture and Natural Resource Publication 3421, Oakland). Records in California are from canals in the lower Colorado River drainage near Winterhaven in Imperial County and near Blythe in Riverside County, and private ponds in San Diego (Fallbrook) and San Luis Obispo (Price Canyon Rd.) counties (Hrusa et al. 2002, Madroño 49:61–98). *Salvinia molesta* has also been reported from the San Diego River, San Diego County, but no specimen has been seen (Hrusa et al. *loc. cit.*). The Fallbrook pond population, also in San Diego County, may have been purposely planted for cultivation and sale (Hrusa et al. *loc. cit.*).

Significance. This collection represents the first record from Orange County and the Santa Ana River watershed, and the first confirmed naturalized occurrence of giant salvinia from coastal lowlands in southern California. *Salvinia molesta* is one of the world's worst aquatic pests (Holm et al. 1997, *World weeds: Natural histories and distribution*, John Wiley and Sons, NY). It is a federally listed noxious weed (Plant Protection and Quarantine 2002, Federal noxious weed list, USDA Animal and Plant Health Inspection Service, Washington, DC.) that has the potential to significantly affect the ecology of freshwater habitats throughout much of the southern U.S. (Federal Register 2003, Vol. 68:9633–9634). *Salvinia molesta* is also recognized as a species with the potential to spread explosively in California (CAL-EPPC 1999, in: Anderson

et al. [eds.], Exotic plants of greatest ecological concern in California, California Exotic Pest Plant Council). *Salvinia molesta* may be expected to naturalize wherever water hyacinth (*E. crassipes*) persists or in areas that experience frost but not the formation of ice on freshwaters (Whiteman and Room 1991, Aquatic Botany 40:27–35; DiTomaso and Healy *loc. cit.*). Accordingly, *S. molesta* has apparently naturalized and is spreading in the mild Mediterranean climate of the southern California coastal zone, and should be expected elsewhere. Additional occurrences should be sought in low-lying, slow-moving waters of ponds, reservoirs, and wetlands, especially in the San Diego area and the Los Angeles basin, throughout the southern and central California coastal counties.

—RICHARD E. RIEFNER, JR., 5 Timbre, Rancho Santa Margarita, CA 92688 and STEVE BOYD, Herbarium, Rancho Santa Ana Botanic Garden, 1500 N. College Avenue, Claremont, CA 91711.

TROPIDOCARPUM CAPPARIDEUM E. Greene (BRASSICACEAE).—Monterey Co.: Fort Hunter Liggett. Adjacent to Gabilan Rd. ca. 1.3 km SSE of intersection with San Miguelito Loop Rd, Gabilan Valley. Scattered in frequently burned, open, annual, disturbed grassland in large swale on Salinas clay-loam, with *Avena barbata*, *Centaurea solstitialis*, *Bromus hordeaceus*, *Lupinus nanus*, and *Erodium* sp., near 35.9238°N, 121.2400°W., elev. ca. 350 m., 19 Apr 2000, Meredith Osborne 16, with Louann Guzman, Daryl Witmore, and Laura Eliassen (CDA, MO, SBBG), det. Ihsan Al-Shebaz (MO). West of Gabilan Crk, ca. 0.4 km S of jct of Gabilan and San Miguelito Loop roads; near 35.92725°N, 121.24181°W., elev. ca. 380 m., 29 Apr 2001, D.H. Wilken 15876 with A. Hazebrook and T. Morosco (JEPS, MO, SBBG), det. Ihsan Al-Shebaz (MO).

Previous knowledge. Known from northwestern San Joaquin Valley near Mt. Diablo (Alameda, Contra Costa, and San Joaquin counties) in grasslands on low hills and valleys with alkaline soils (P. Munz, A California Flora, 1963; R. Rollins, The Cruciferae of continental North America, 1993). Also reported from Glenn, Monterey, and Santa Clara counties (D. Tibor, editor, CNPS Inventory, 6th edition, 2001), but believed extirpated at all previously known sites. A specimen from Fresno County (H. de Forst in 1930, RSA) provides no location. A collection from "Jolon Grade", Monterey County by C. Thurcan in 1920 (RSA) belongs to *T. gracile* Hook. (det. Steve Boyd, RSA).

Significance. First verified records from Monterey County, and first observations since 1957. Previously considered extinct (D. Tibor, editor, CNPS Inventory, 6th edition, 2001). In 2001, the Gabilan Valley population consisted of ca. 300 plants scattered widely within 20 acres. In 2002, this population was more closely surveyed and ca. 600 plants were observed over the same area. A second population at Fort Hunter Liggett was found near El Piojo Creek, Long Valley, ca. 1.3 mi NW of Sam Jones Rd, near 35.889°N, 121.1731°W, Elev. 350 m, 13 May 1999, A. Hazebrook and S. Weis s.n., where it occurred in a frequently burned grassland/oak savanna on moderately alkaline, slowly draining silty clay soil with *Bromus hordeaceus*, *Vulpia myuros*, *Erodium cicutarium*, *Lupinus bicolor*, and *Hemizonia lobbii*.

* Current address: California Department of Fish and Game, 4949 Viewridge Avenue, San Diego, CA, 92123.

—MEREDITH A. OSBORNE* and ARTHUR W. HAZEBROOK, Research Associates, Center for Environmental Management of Military Lands, Colorado State University, under contract to Fort Hunter Liggett, CA 93928-7110.

OREGON

ACER RUBRUM L. (ACERACEAE).—Lane Co., 6 m tree adventive in dense stand of *Carex obnupta* L. H. Bailey, disturbed wet prairie remnant, W of Danebo Street, N of Amazon Creek, Eugene, elev. 120 m, 7 Oct 2004, P. F. Zika & E. R. Alverson 20377 (OSC, WTU).

Previous knowledge. Red maple is native to eastern North America, west to Manitoba. It is commonly planted as an ornamental west of the Cascades in Oregon and Washington.

Significance. First report for Oregon as an escape from cultivation.

CAREX TRIBULOIDES Wahlenb. var. *TRIBULOIDES* (CYPERACEAE).—Multnomah Co., silty bank on E shore of Sandy River delta, elev. 5 m, 26 Jul 2000, P. F. Zika 15116 (MICH, WTU); dupl. det. by A. A. Reznicek).

Previous knowledge. Blunt broomsedge is native to eastern North America, west to Nebraska. It is adventive on the lower Fraser River in British Columbia (Douglas and Ceska 2001, In: Douglas et al. (eds.), Illustrated Flora of British Columbia, Vol. 6. Monocotyledons (Acoraceae through Najadaceae), British Columbia Ministry of Environment, Lands and Parks, Ministry of Forests, Victoria, BC, p. 18–158).

Significance. First record for Oregon.

COTONEASTER MUCRONATUS Franch. (ROSACEAE).—Benton Co., adventive in mesic disturbed forest, E slope of Witham Hill, elev. 100 m, 28 Oct 2003, P. F. Zika 19264 (OSC, WTU; dupl. det. J. Fryer); same site, 15 May 2004, P. F. Zika 19584 (WTU).

Previous knowledge. Native to western China. Mucronate cotoneaster is an infrequent ornamental planting in western Oregon. It escapes from cultivation in England (Stace 1997, New Flora of the British Isles, 2nd ed., Cambridge University Press, Cambridge, U.K.).

Significance. First collection as a wild plant in Oregon.

COTONEASTER NITENS Rehder & E. H. Wilson (ROSACEAE).—Lane Co., thickets, S slope of Skinner Butte, Eugene, elev. 165 m, 7 Nov 2004, E. R. Alverson s.n. (OSC).

Previous knowledge. Few-flowered cotoneaster is native to western China. It is infrequently planted in gardens, and is locally escaped from cultivation in King Co., Washington (Zika 2002, Madroño 49: 195–197).

Significance. First record as a garden escape in Oregon.

COTONEASTER PANNOSUS Franch. (ROSACEAE).—Jackson Co., adventive on dry forested slope, Waterline Road, Ashland, elev. 700 m, 19 May 2004, P. F. Zika 19658 (OSC).

Previous knowledge. Native to southwestern China. Silverleaf cotoneaster is an occasional escape from cultivation on the coast of California. Prior reports of this species from Oregon were based on misidentifications.

Significance. First collection as a wild plant in Oregon.

HEDERA COLCHICA (K. Koch) K. Koch (ARALIACEAE).—Curry Co., locally common, climbing 5 m into *Picea sitchensis* (Bong.) Carrière, *Thuja plicata* Donn ex D. Don, dense thickets along Route 101, near Coos County line, elev. 30 m, 17 May 2004, P. F. Zika 19623 (OSC, WTU).

Previous knowledge. Persian ivy is native to the Cau-